

What is Claimed Is:

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- 1 1. An adapter for use with point of sale card readers,
2 the adapter comprising:
3 a) a housing, including at least a reader-
4 insertable portion capable of being inserted in
5 the card reader;
6 b) a receive circuit in the housing;
7 c) a processor in the housing connected to the
8 receive circuit; and
9 d) a point of sale interface in the reader
10 insertable portion of the housing connected to
11 the processor.

- 1 2. The adapter of claim 1, wherein the entire housing
2 is reader insertable.

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- 1 3. The adapter of claim 2, wherein the housing is
2 substantially the same size as a conventional credit
3 card.

- 1 4. The adapter of claim 1, wherein the point of sale
2 interface comprises a magnetic stripe emulator.

- 1 5. The adapter of claim 4, wherein the magnetic stripe
2 emulator comprises at least one electromagnet.

- 1 6. The adapter of claim 4, wherein the magnetic stripe
2 emulator comprises a plurality of electromagnets.

- 1 7. The adapter of claim 1, wherein the point of sale
2 interface comprises a smart card emulator.

1 8. The adapter of claim 1, wherein the point of sale
2 interface comprises a magnetic stripe emulator and a
3 smart card emulator.

1 9. The adapter of claim 1, wherein the receive circuit
2 comprises an infra-red sensitive device.

1 10. The adapter of claim 1, wherein the receive circuit
2 comprises a radio-frequency circuit.

1 11. The adapter of claim 1, further comprising a
2 transmit circuit, wherein the receive circuit and
3 the transmit circuit comprise a transceiver.

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1 12. The adapter of claim 1, further comprising a data
2 buffer connected to the processor

1 13. The adapter of claim 12, wherein the data buffer is
2 configured to purge data after a predetermined
3 period of time.

1 14. The adapter of claim 12, wherein the data buffer is
2 configured to purge data after a predetermined
3 number of data transfer operations.

1 15. The adapter of claim 1, wherein the processor
2 further comprises a data buffer.

1 16. The adapter of claim 15, wherein the data buffer is
2 configured to purge data after a predetermined
3 period of time.

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1 17. The adapter of claim 15, wherein the data buffer is
2 configured to purge data after a predetermined
3 number of data transfer operations.

1 18. An adapter for use with point of sale card readers,
2 the adapter comprising:
3 a) a housing, capable of being inserted in the
4 card reader;
5 b) a transceiver in the housing;
6 c) a processor in the housing connected to the
7 transceiver;
8 d) an electromagnet configured to emulate a
9 magnetic stripe connected to the processor.

1 19. The adapter of claim 18, wherein the housing is
2 substantially the same size as a conventional credit
3 card.

1 20. The adapter of claim 18, further comprising a smart
2 card emulator connected to the processor.

1 21. The adapter of claim 18, wherein the transceiver
2 comprises an infra-red transceiver.

1 22. The adapter of claim 18, wherein the transceiver
2 comprises a radio-frequency transceiver.

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1 23. The adapter of claim 18, further comprising a data
2 buffer connected to the processor, the data buffer
3 configured to purge data after a predetermined
4 period of time.

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1 24. The adapter of claim 18, further comprising a data
2 buffer connected to the processor, the data buffer
3 configured to purge data after a predetermined
4 number of data transfer operations.

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1 25. A method of using an adapter with a point of sale
2 card reader, comprising:
3 a) selecting a card on an electronic transaction
4 device;
5 b) placing the adapter in the card reader;
6 c) transmitting information corresponding to the
7 selected card from the electronic transaction
8 device to the adapter;
9 d) the adapter converting the information
10 corresponding to the selected card to a format
11 readable by the card reader;
12 e) the card reader reading the converted
13 information.

1 26. The method of claim 25, wherein the step of
2 converting the information corresponding to the
3 selected card to a format readable by the card
4 reader further comprises emulating a magnetic
5 stripe.

1 27. The method of claim 26, wherein the step of
2 emulating a magnetic stripe comprises generating
3 electromagnetic signals.

1 28. The method of claim 26, wherein the step of
2 emulating a magnetic stripe further comprises:
3 a) receiving the information corresponding to the
4 selected card;

- 5 b) formatting the information corresponding to the
6 selected card to conform with magnetic stripe
7 standards; and
8 c) dynamically writing the formatted information to
9 an electromagnet.

1 29. The method of claim 25, wherein the step of
2 converting the information corresponding to the
3 selected card to a format readable by the card
4 reader further comprises emulating a smart card.

1 30. The method of claim 29, wherein the step of
2 emulating a smart card further comprises:
3 a) receiving the information corresponding to the
4 selected card;
5 b) formatting the information corresponding to the
6 selected card to conform with smart card
7 standards; and
8 c) dynamically writing the formatted information to
9 electrical contacts conforming with smart card
10 standards.

1 31. The method of claim 25, wherein the step of placing
2 the adapter in the card reader occurs before the
3 step of transmitting information.

1 32. The method of claim 25, wherein the step of
2 transmitting information occurs before placing the
3 adapter in the card reader, and further comprising
4 the step of buffering the information corresponding
5 to the selected card in the adapter.

1 33. The method of claim 32, further comprising the step
2 of purging the information corresponding to the
3 selected card after the step of reading the magnetic
4 fields at the card reader.

1 34. The method of claim 32, further comprising the step
2 of purging the information corresponding to the
3 selected card after a predetermined period of time.

1 35. The method of claim 32, further comprising the step
2 of purging the information corresponding to the
3 selected card after a predetermined number of data
4 transfer operations.

1 36. The method of claim 25, further comprising the step
2 of the adapter transmitting information to the
3 electronic transaction device.

1 37. The method of claim 36, wherein the step of the
2 adapter transmitting information to the electronic
3 transaction device includes transmitting
4 confirmation information to the electronic
5 transaction device.

1 38. The method of claim 36, wherein the step of the
2 adapter transmitting information to the electronic
3 transaction device includes transmitting an
4 electronic receipt to the electronic transaction
5 device.

1 39. The method of claim 32, further comprising the step
2 of purging the information corresponding to the
3 selected card after the step of the adapter

4 transmitting information to the electronic
5 transaction device.

1 40. An electronic transaction device adapted for use
2 with point of sale card readers, the electronic
3 transaction device comprising:
4 a) a housing, adapted to fit in a pocket or purse,
5 the housing including at least a reader-
6 insertable portion capable of being inserted in
7 the card reader;
8 b) a processor, enclosed in the housing, adapted
9 to process account information relating to at
10 least one service institution account
11 associated with a user of the electronic
12 transaction device
13 c) a display, connected to the processor and
14 adapted to display the account information,
15 d) memory, connected to the processor and adapted
16 to store the account information; and
17 e) a point of sale interface in the reader
18 insertable portion of the housing, connected to
19 the processor and adapted to transmit the
20 account information to a point of sale card
21 reader.

1 41. The adapter of claim 40, wherein the point of sale
2 interface comprises a magnetic stripe emulator.

1 42. The adapter of claim 40, wherein the point of sale
2 interface comprises a smart card emulator.

- 1 43. The adapter of claim 40, wherein the point of sale
2 interface comprises a magnetic stripe emulator and a
3 smart card emulator.

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